REMARKS

Present Status

The drawings are objected to. Claim 1 is rejected under 35 USC 112, first paragraph, as failing to comply with the enablement requirement. The outstanding Office Action rejected Claims 1 and 4-8 under 35 USC 103(a) as being unpatentable over Fang (US 6907535, hereinafter "Fang") in view of Oh (US 7069463, hereinafter "Oh"). The outstanding Office Action rejected Claims 2 and 3 under 35 USC 103(a) as being unpatentable over Fang in view of Oh, and further in view of Pillay et al. (US 7000138, hereinafter "Pillay").

Discussion of drawing objection

The Claim Amendment is enough for overcoming the drawing objection. Therefore, Applicant respectfully requests the drawing objection to be withdrawn.

Discussion of 35 USC 112, first paragraph rejection

The Claim Amendment is enough for overcoming the 35 USC 112, first paragraph rejection. Therefore, Applicant respectfully requests the 35 USC 112, first paragraph rejection to be withdrawn.

Discussion of 35 USC 103(a) rejection

Applicant respectfully traverses the rejections of claims 1 and 4-8 under 35 U.S.C § 103(a) as being unpatentable over Fang in view of Oh. To establish a prima facie case of obviousness under 35 U.S.C § 103(a), three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. See MPEP § 2143.

The Examiner failed to establish prima facie obviousness in rejecting Claims 1 and 4-8 because Fang and Oh, taken alone or combined, fail to teach or suggest, among other things, a method for dynamically adjusting CPU frequency having steps of "providing a translation table, comprising a plurality of layers, ***each of the layers defining a corresponding front-side bus operation frequency and a corresponding range of a central processing unit usage rate***; ... adjusting the front-side bus operation frequency to a corresponding layer, so as to ***locate the current usage rate in the corresponding range of the central processing unit usage rate***" (emphasis added) as recited in Claim 1.

Fang discloses a method and device for adjusting CPU working frequency based on CPU's load value, either by hardware, software or combination thereof. When the portable personal computer is turned on, the program reads the CPU's load value for deciding to change the working frequency of CPU or not.

Oh discloses an apparatus and method of throttling a CPU clock based on a remaining battery capacity or CPU load value, in order to reduce power consumption, even though the system performance may be lowered.

The Examiner holds that Oh teaches "a table for throttling a bus clock frequency, which comprises a plurality of layers, wherein each comprises a range of CPU loads" (See Page 4 of the outstanding Office Action), which the Applicant does not necessarily accept. In Oh's teaching, the throttle rate of the bus clock and the system performance are adjusted based on the remaining battery capacity. In Oh's Fig. 7, the table lists the relationship between the remaining battery capacity, the throttle rate of the bus clock and the system performance, ***not the range of CPU loads***. However, as recited in Claim 1, each layer of the table defines a FSB operation frequency and a range of CPU usage rate. Further, in Oh, the system performance is lower if the remaining battery capacity is lower. However, in Claim 1, the range of the CPU usage rate and the current CPU usage rate is not affected even if the FSB operation frequency is adjusted.

Moreover, the combination of Fang and Oh fails to show a method for dynamically adjust CPU frequency in which, ***the FSB frequency is adjusted to locate the current usage rate in the range of the CPU usage rate***.

Therefore, the Applicant respectfully submits that, the Examiner has failed to show where Fang and Oh, taken alone or combined, a method for dynamically adjusting CPU frequency having steps of "providing a translation table, comprising a plurality of layers, ***each of the layers defining a corresponding front-side bus operation frequency and a corresponding range of a central processing unit usage rate***; ... adjusting the front-side bus operation frequency to a corresponding layer, so as to ***locate the current usage rate in the corresponding range of the central processing unit usage rate***" (emphasis added) as recited in Claim 1.

Furthermore, the Examiner failed to establish prima facie obviousness because there is no motivation to combine Fang and Oh. A determination of obviousness must be supported by evidence on the record. See In re Zurko, 258 F.3d 1379, 1386 (Fed. Cir. 2001) (finding that the factual determinations central to the issue of patentability, including conclusions of obviousness by the Board, must be supported by "substantial evidence" that is a result of a "thorough and searching" factual inquiry. See In re LEE, 277 F.3d 1338, 1343-1344 (Fed. Cir. 2002) (quoting McGinley v. Franklin Sports, Inc., 262 F. 3d 1339, 1351-52).

The Examiner has not shown that a skilled artisan considering Fang and Oh would have been motivated to combine or modify the references in a manner resulting in the recitations of claim 1 without benefit of Applicant's disclosure. Instead, the Examiner merely states that since Oh teaches a table and it is well known that the tables can be constructed and formatted in a plurality of different ways for a given environment, it would have been obvious to construct the table in Fang utilizing the teachings of Oh. See Office Action, page 4. This conclusion, however, is not properly supported by the references and does not show that a skilled artisan would have combined the references as hold.

The fact that Fang and Oh describe some form of FSB operation frequency does not demonstrate that a skilled artisan would have been motivated to modify the cited art as hold. The MPEP makes clear that: "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combinations." See MPEP 2145.01.

The Examiner has not shown that the cited art "suggests the desirability" of the hold combination. Indeed, there is no reason why, without gleaning information from the Applicant's disclosure, an artisan would modify the FSB frequency adjusting apparatus/method of Fang to enable bus clock throttle disclosed by Oh. As such, Applicant submits that the Examiner's conclusion to add selective portions of Oh to cure the deficiencies of Fang was reached through

improper hindsight and without concern for the desirability of the combination. Therefore, the Examiner has failed to provide proper suggestion or motivation to combine Fang and Oh in the manner claimed in Claim 1.

Further, Fang may be achieved by hardware or software and Oh is achieved by hardware. However, the application is achieved by software. Even if Fang's hardware may be combined with Oh's hardware, which the Applicant respectfully disagrees, the combination does not show each and every feature recited in Claim 1. On the other hand, the both cited references do not suggest how to combine Fang's software with Oh's hardware.

Accordingly, since the cited references, taken either alone or in any reasonable combination, fail to teach each and every element recited in Claim 1, no prima facie case of obviousness has been made out with respect to this claim. Applicant respectfully requests the Examiner to reconsider and withdraw the rejection of Claim 1 under 35 USC 103(a) as being obvious from the cited references.

Claims 4-8 depend from Claim 1. As explained, Claim 1 recites elements not disclosed by Fang and Oh. Accordingly, Claims 4-8 are allowable over Fang and Oh for at least the same reason as claim 1. Applicant therefore requests that the rejections of Claims 4-8 under 35 USC 103(a) be withdrawn and the claims allowed.

At least for the same reasons above, Pillay would not compensate for the deficiencies of Fang and Oh in rejecting Claim 1. Claims 2 and 3 depend from Claim 1. As explained, Claim 1 recites elements not disclosed by Fang, Oh and further in view of Pillay. Accordingly, Claims 2 and 3 are allowable for at least the same reason as claim 1. Applicant therefore requests that the rejections of Claims 2 and 3 under 35 USC 103(a) be withdrawn and the claims allowed.

Customer No.: 31561
Application No: 10/709,508
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CONCLUSION

For at least the foregoing reasons, it is believed that the all pending claims are in proper condition for allowance and an action to such effect is earnestly solicited. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,

Belinda Lee

Belinda Lee
Registration No.: 46,863

Jianq Chyun Intellectual Property Office
7th Floor-1, No. 100
Roosevelt Road, Section 2
Taipei, 100
Taiwan
Tel: 011-886-2-2369-2800
Fax: 011-886-2-2369-7233
Email: belinda@jcipgroup.com.tw
Usa@jcipgroup.com.tw